

the diameter of the outer surface of each of the inner coupler and the outer coupler is greater than a diameter of the first center conductor and the second center conductor; and

the outer surface of each of the inner coupler and the outer coupler tapers towards the first spiral inductor and the second spiral inductor.

13. The surge protector of claim **10** further comprising a second dielectric material and wherein:

the outer coupler includes a first axial end positioned proximate to the first center conductor and a second axial end positioned proximate to the second center conductor;

the inner coupler also includes a base portion that defines an annular volume for receiving at least a portion of the second axial end of the outer coupler; and

the second dielectric material is positioned radially between the base portion of the inner coupler and the second axial end of the outer coupler.

14. The surge protector of claim **10** wherein:

the outer coupler and the inner coupler each include a first axial end positioned proximate to the first center conductor and a second axial end positioned proximate to the second center conductor;

the shaft of the inner coupler has a length;

the volume defined by the inner surface of the outer coupler has a length that is greater than the length of the shaft such that an axial space is present between the second axial end of the shaft of the inner coupler and the second axial end of the volume of the outer coupler; and

the volume defined by the inner surface of the outer coupler tapers towards a point at the second axial end to increase the axial space between the second axial end of the shaft and the second axial end of the volume.

15. The surge protector of claim **10** further comprising: an extender having a pin, a center, and a receiving end that defines an opening for receiving a portion of the inner coupler or the outer coupler; and

a dielectric ring positioned about an outer surface of the center of the extender,

wherein:

the first center conductor defines a pin slot for receiving at least a portion of the pin of the extender,

the cavity includes a first conductor portion about the first center conductor and an extender portion about the extender, the extender portion having a greater diameter than the first conductor portion, and

the outer surface of the center of the extender has a diameter that is less than a diameter of the outer surface of the receiving end of the extender such that axial movement of the dielectric ring is restricted by the first conductor portion of the cavity and the receiving end of the extender.

16. A surge protector comprising:

a housing defining a cavity and having an axis, a first axial end, and a second axial end;

a first center conductor positioned within the cavity at the first axial end of the housing and a second center conductor positioned within the cavity at the second axial end of the housing;

an inner coupler positioned within the cavity, having a shaft and a base portion that defines an annular volume, and being coupled to the first center conductor;

an outer coupler positioned within the cavity, having an inner surface that defines a volume for receiving at least a portion of the shaft of the inner coupler, being coupled to the second center conductor, and configured to at least partially be received by the annular volume of the base portion of the inner coupler;

a first dielectric material positioned between the shaft and the inner surface;

a second dielectric material positioned radially between the base portion of the inner coupler and the outer coupler;

a first spiral inductor positioned within the cavity, having an inner curve coupled to the first center conductor and an outer curve; and

a second spiral inductor positioned within the cavity, having an inner curve coupled to the second center conductor and an outer curve, such that the inner coupler and the outer coupler are each at least partially positioned axially between the first spiral inductor and the second spiral inductor.

17. The surge protector of claim **16** further comprising a tube positioned within the cavity, axially between the first spiral inductor and the second spiral inductor, and radially outward from the inner coupler and the outer coupler, wherein:

the cavity of the housing has a cavity diameter about the first center conductor;

the tube has a tube diameter;

the first center conductor has a conductor diameter;

the outer coupler has a coupler diameter; and

a ratio of the conductor diameter to the conductor diameter is within ten percent of a ratio of the tube diameter to the coupler diameter.

18. The surge protector of claim **16** wherein:

each of the inner coupler and the outer coupler has an outer surface having a diameter;

the diameter of the outer surface of the inner coupler is greater than the diameter of the outer surface of the outer coupler;

the diameter of the outer surface of each of the inner coupler and the outer coupler is greater than a diameter of the first center conductor and the second center conductor; and

the outer surface of each of the inner coupler and the outer coupler tapers towards the first spiral inductor and the second spiral inductor.

19. The surge protector of claim **16** wherein:

the outer coupler and the inner coupler each include a first axial end positioned proximate to the first center conductor and a second axial end positioned proximate to the second center conductor;

the shaft of the inner coupler has a length;

the volume defined by the inner surface of the outer coupler has a length that is greater than the length of the shaft such that an axial space is present between the second axial end of the shaft of the inner coupler and the second axial end of the volume of the outer coupler; and

the volume defined by the inner surface of the outer coupler tapers towards a point at the second axial end to increase the axial space between the second axial end of the shaft and the second axial end of the volume.